

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 91-43

APPROVAL OF AN AMENDMENT TO THE COMPREHENSIVE
WATER QUALITY CONTROL PLAN
FOR THE SAN DIEGO REGION REVISING SURFACE AND
GROUND WATER QUALITY OBJECTIVES FOR
THE MISSION SAN DIEGO AND A PORTION OF
THE SANTEE HYDROLOGIC SUBAREAS

WHEREAS:

1. The California Regional Water Quality Control Board, San Diego Region (San Diego Regional Board), adopted the Comprehensive Water Quality Control Plan for the San Diego Basin (Basin Plan) on March 17, 1975.
2. Section 13240 of the California Water Code specifies that basin plans be periodically reviewed and, if appropriate, revised.
3. On April 23, 1990, following a public hearing, the San Diego Regional Board adopted Resolution No. 90-27 (Attachment 1) which amended the Basin Plan by modifying: (1) the Implementation Plan to provide an alternate method of complying with the existing narrative nutrient objective for surface waters in the Mission San Diego Hydrologic Subarea (HSA) (HSA 907.11) and a portion of the Santee HSA (HSA 907.12); (2) surface water quality objectives for total dissolved solids (TDS) within a portion of the Santee HSA; and (3) ground water quality objectives for TDS, chlorides, sulfate, and boron within a portion of the Santee HSA.
4. On March 11, 1991, following a public hearing, the San Diego Regional Board adopted Resolution No. 91-23 (Attachment 2) which amended the requirements for the alternate method of complying with the narrative nutrient objective for surface waters contained in Resolution No. 90-27.
5. The alternative method of compliance referenced in Whereas 3 and 4 above involves the development and implementation of a comprehensive water course management plan, the details of which are to be stipulated in the National Pollutant Discharge Elimination System permit(s) issued to dischargers of reclaimed water to surface waters in those portions of the Mission San Diego and Santee HSAs to which the proposed amendment applies.
6. The portion of the Santee HSA to which the proposed Basin Plan amendment applies, henceforth known as the Lower Sycamore Canyon Area, is described as:

That portion of the Santee HSA which drains to the San Diego River downstream from the confluence of the River with Sycamore Canyon. Excluded from the Lower Sycamore Canyon Area is that portion of the Santee HSA which drains to Sycamore Canyon north of the boundary between Sections 28 and 33, Township 14 South, Range 1 West (see Attachment 3).

7. The San Diego Regional Board proposed ground water quality objectives for the alluvial aquifer in the Lower Sycamore Canyon Area, but did not provide a geologic definition of the alluvial aquifer.
8. There is no current or planned use of surface waters in the Mission San Diego HSA and Lower Sycamore Canyon Area for domestic and municipal water supplies. The surface waters are designated potential MUN in the Basin Plan, and this designation may need to be revised in the event of increased discharge of reclaimed wastewater occurs in the area.
9. The San Diego Regional Board staff prepared documents and followed procedures satisfying environmental documentation requirements in accordance with the California Environmental Quality Act.
10. The State Water Resources Control Board (State Board), after reviewing the proposed Basin Plan amendment and supporting documents provided by the San Diego Regional Board and other available information, finds that there is sufficient evidence to show that the proposed revisions to surface and ground water quality objectives comply with the requirements of the Federal antidegradation regulations and State Board Resolution No. 68-16.
11. Section 13245 of the California Water Code specifies that a revision of a water quality control plan adopted by a Regional Water Quality Control Board does not become effective until approved by the State Board.

THEREFORE BE IT RESOLVED:

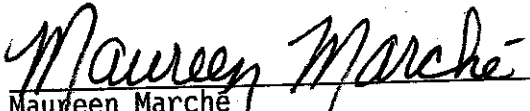
That the State Board:

1. Approve San Diego Regional Board Resolution No. 90-27 and the amendment thereto, San Diego Regional Board Resolution No. 91-23, amending the Comprehensive Water Quality Control Plan, San Diego Basin.
2. Direct the San Diego Regional Board to reconsider the appropriateness of the potential municipal and domestic water supply (MUN) beneficial use designation for the San Diego River in the areas to which the proposed amendment applies.
3. Approve the proposed modification to the ground water quality objectives for the alluvial aquifer in the Lower Sycamore Canyon Area, with the understanding that the San Diego Regional Board will develop a geologic definition of the alluvial aquifer; and

4. Direct staff to submit the surface water elements of the amendment to the U.S. Environmental Protection Agency for approval.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on June 20, 1991.


Maureen Marché
Administrative Assistant to the Board

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

RESOLUTION NO. 90-27

A RESOLUTION ADOPTING AMENDMENTS
TO THE
COMPREHENSIVE WATER QUALITY CONTROL PLAN
FOR THE
SAN DIEGO REGION
FOR THE MISSION SAN DIEGO AND
A PORTION OF THE SANTEE HYDROLOGIC SUBAREAS

WHEREAS, in accordance with Section 13240 et seq. of the California Water Code, the California Regional Water Quality Control Board, San Diego Region, caused to be developed a Comprehensive Water Quality Control Plan for the San Diego Water Quality Control Region; and,

WHEREAS, the Regional Board, acting in accord with Section 13244 of the California Water Code, on March 17, 1975, adopted the Comprehensive Water Quality Control Plan for the San Diego Water Quality Control Region as set forth in Chapters 1 through 7 of the Comprehensive Water Quality Control Plan Report, San Diego Region (9) (Basin Plan); and,

WHEREAS, the Regional Board has adopted amendments to the Basin Plan from time to time since March 17, 1975, all of which modified the beneficial uses and/or water quality objectives for various subareas; and,

WHEREAS, the Regional Board conducted public hearings on March 12, 1990, and April 23, 1990, for the purpose of receiving testimony on proposed amendments that, for the Mission San Diego Hydrologic Subarea (HSA 7.11), and a portion of the Santee Hydrologic Subarea (HSA 7.12), would revise the surface and ground water quality objectives of the Basin Plan; and,

WHEREAS, the portion of the Santee Hydrologic Subarea that the revisions would apply to is the lower Sycamore Canyon portion of the Santee Hydrologic Subarea and is described as a portion of and includes all of the Sycamore Canyon watershed except that part which drains to Sycamore Canyon north of the boundary between Sections 28 and 33, Township 14 South, Range 1 West; and,

WHEREAS, a report describing the proposed amendments and containing environmental documentation functionally equivalent to the California Environmental Quality Act requirements was transmitted to interested individuals and public agencies for review and comment; and,

WHEREAS, the Regional Board has reviewed and carefully considered all comments and testimony received relative to the proposed amendments; and,

WHEREAS, the Regional Board has determined that the proposed amendments will not have a significant effect on the environment as long as the proposed mitigation measures are adopted;

WHEREAS, the Regional Board has determined that the proposed amendments comply with State Water Resources Control Board Resolution No. 68-16.

BE IT RESOLVED, that the Comprehensive Water Quality Control Plan for the San Diego Region be amended as follows:

1. Table 4-6, "Water Quality Objectives for Inland Surface Waters", appearing in Chapter 4, Water Quality Objectives, is revised to reflect the following modification to the surface water quality objectives in the portion of the Santee Hydrologic Subarea described above:

Parameter	Unit	Objective
Total Dissolved Solids	mg/l	1500

2. Table 4-7, "Water Quality Objectives for Groundwater", appearing in Chapter 4, Water Quality Objectives, is revised to reflect the following modifications to the ground water quality objectives in that portion of the Santee Hydrologic Subarea described above as the lower Sycamore Canyon watershed, for the alluvial aquifer only:

Parameter	Unit	Objective
Total Dissolved Solids	mg/l	2000
Chloride	mg/l	800
Sulfate	mg/l	600
Boron	mg/l	2.0

The remaining portions of the Santee Hydrologic Subarea (HSA 7.12), including the deeper aquifer underlying the alluvial aquifer identified above, shall continue to have the existing water quality standards previously designated in the Basin Plan.

3. The following modification to Chapter 5 of the Basin Plan, "Implementation Plan", is applicable only to that part of the San Diego River which receives discharges from the tributary Sycamore Canyon and downstream, located within the Santee HSA (7.12) and the Mission San Diego HSA (7.11):

"Table 4-6, Chapter 4, of the Basin Plan contains a footnote addressing concentrations of nitrogen and phosphorus in surface waters. The footnote includes a narrative objective, requiring that concentrations of nitrogen and phosphorus be maintained at levels below those which stimulate emergent plant growth. In addition, the footnote includes numerical objectives for phosphorus which are applicable in two locations: (1) at the point where a stream enters any reservoir or lake; and (2) in any reservoir or lake. The footnote also contains a desired goal for phosphorus concentrations in streams and other flowing waters. In general, permissible ratios of nitrogen to phosphorus are to be determined on the basis of site-specific data. In the absence of such data, a ratio of nitrogen to phosphorus of 10 to 1 must be used.

The Regional Board will ensure compliance with the objectives for nitrogen and phosphorus contained in the footnote to Table 4-6 in the following manner:

- (1) The Regional Board will establish appropriate effluent limitations for nitrogen and phosphorus in waste discharge requirements for discharges to surface waters for those cases in which the numerical objectives contained in the footnote to Table 4-6 are applicable.
- (2) For those cases in which the numerical objectives are inapplicable, the Regional Board will adopt waste discharge requirements which require compliance with the narrative objective contained in the footnote to Table 4-6. The Regional Board will enforce the narrative objective in two ways:
 - (a) In appropriate cases, the Regional Board may use the goal for phosphorus concentration in flowing water contained in the footnote as guidance in establishing appropriate effluent limitations. The Regional Board may also use any other appropriate concentration.

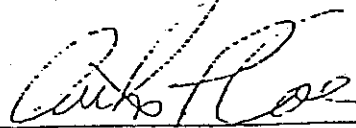
(b) Alternatively, the Regional Board will determine compliance with the narrative objective based upon the following three factors: (A) measurement of ambient concentrations of nitrogen and phosphorus; (B) the dissolved oxygen requirements of downstream beneficial uses; and (C) use of best available technology (BAT), economically feasible, for the removal of nutrients."

BE IT FURTHER RESOLVED, THAT as mitigation measures against any adverse impacts of objectionable odors and public health hazards resulting from use of reclaimed water, the Regional Board will continue to adopt and enforce waste discharge requirements containing prohibitions against creation of objectionable odors and implementing the State Department of Health Services' Wastewater Reclamation Criteria.

BE IT FURTHER RESOLVED, THAT in order to show conformance with State Water Resources Control Board Resolution No. 68-16, any discharger applying reclaimed water for the purpose of irrigation in the lower Sycamore Canyon portion of the Santee Basin to which these water quality objectives apply shall demonstrate that the ground water quality is not being degraded by that activity.

BE IT FURTHER RESOLVED, THAT as mitigation against any adverse impacts to instream or downstream surface or ground water quality and/or the environment resulting from the discharge of reclaimed wastewater into the San Diego River, the discharger shall establish and implement a comprehensive river monitoring and management program that shall be part of the waste discharge permit adopted by the Regional Board.

I, Arthur L. Coe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Resolution adopted by the California Regional Water Quality Control Board, San Diego Region, on April 23, 1990.



Arthur L. Coe
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

RESOLUTION NO. 91-23

A RESOLUTION AMENDING RESOLUTION NO. 90-27,
A RESOLUTION
ADOPTING AMENDMENTS TO THE
COMPREHENSIVE WATER QUALITY CONTROL PLAN
FOR THE
SAN DIEGO REGION
FOR THE MISSION SAN DIEGO AND
A PORTION OF THE SANTEE HYDROLOGIC SUBAREAS

WHEREAS, in accordance with Section 13240 et seq. of the California Water Code, the California Regional Water Quality Control Board, San Diego Region (Regional Board), caused to be developed a Comprehensive Water Quality Control Plan for the San Diego Water Quality Control Region; and,

WHEREAS, the Regional Board, acting in accord with Section 13244 of the California Water Code, on March 17, 1975, adopted the Comprehensive Water Quality Control Plan for the San Diego Region as set forth in Chapters 1 through 7 of the Comprehensive Water Quality Control Plan Report, San Diego Basin (9) (Basin Plan); and,

WHEREAS, the Regional Board, after conducting public hearings on March 12, 1990 and April 23, 1990, and considering the testimonies heard, adopted Resolution No. 90-27 on April 23, 1990, amending the Basin Plan; and,

WHEREAS, Resolution No. 90-27 revised the Basin Plan surface and ground water quality objectives for the Mission San Diego Hydrologic Subarea (HSA 7.11), and a portion of the Santee Hydrologic Subarea (HSA 7.12). Resolution No. 90-27 also modified the Implementation Plan to add a method by which the Regional Board can determine compliance with the narrative portion of the nutrient objective; and,

WHEREAS, the portion of the Santee Hydrologic Subarea affected by the revisions is the lower Sycamore Canyon portion of the Santee Hydrologic Subarea, including all of the Sycamore Canyon watershed except that part which drains to Sycamore Canyon north of the boundary between Sections 28 and 33, Township 14 South, Range 1 West; and,

WHEREAS, Resolution No. 90-27 specifies an alternative method by which the Regional Board may determine compliance with the narrative nutrient objective, which alternative method is based upon consideration of the following three factors: (A) measurement of ambient concentrations of nitrogen and phosphorus; (B) the dissolved oxygen requirements of downstream beneficial uses; and (C) use of best available technology economically feasible, for the removal of nutrients; and,

WHEREAS, Resolution No. 90-27 further provides that, as mitigation against any adverse water quality impacts resulting from the discharge of reclaimed wastewater into the San Diego River, the discharger must establish and implement a comprehensive river monitoring and management program that shall be part of the waste discharge requirements adopted by the Regional Board; and,

WHEREAS, the State Board has not taken action, to date, to approve Resolution No. 90-27; therefore, Resolution No. 90-27 is not yet effective; and,

WHEREAS, subsequent to adoption of Resolution No. 90-27, the Regional Board received comments from State Board staff, indicating that the alternative method specified in Resolution No. 90-27 for determining compliance with the narrative nutrient objective did not contain sufficient detail and that, in particular, the specific content of the watercourse management plan must be incorporated into Resolution No. 90-27; and,

WHEREAS, the Regional Board has decided to reconsider Resolution No. 90-27 in light of the comments received from the State Board and to amend Resolution No. 90-27 accordingly; and,

WHEREAS, the Regional Board has determined that this amendment complies with State Water Resources Control Board Resolution No. 68-16 and the federal antidegradation policy outlined in 40 CFR 131.11; and,

WHEREAS, the Regional Board has determined that the proposed amendment will not have an adverse impact on the environment; and,

WHEREAS, a report describing the proposed amendment was transmitted to interested individuals and public agencies for review and comment; and,

WHEREAS, the Regional Board at a public meeting on March 11, 1991, reviewed and carefully considered all comments and testimony received relative to the proposed amendment.

THEREFORE, BE IT RESOLVED, THAT the Comprehensive Water Quality Control Plan Report, San Diego Basin (9) be amended as follows:

Resolve Item No. 3 of Resolution No. 90-27 shall be appended to add the following:

"(b) Alternatively, the Regional Board will determine compliance with the narrative objective based upon the following four factors: (A) measurement of ambient concentrations of nitrogen and phosphorus; (B) the dissolved oxygen requirements of downstream beneficial uses; (C) use of best available technology, economically feasible, for the removal of nutrients, and (D) the development and implementation of a watercourse monitoring and management plan.

The Regional Board will require as part of the watercourse monitoring and management plan, and establish as part of waste discharge requirements in a more detailed form, the following:

1. The best available technology (BAT) is required for the removal of nutrients. Initially, the Regional Board considers tertiary treatment of wastewater that includes the biological and chemical removal of nutrients to be BAT. The extent to which the Regional Board may require additional removal of nutrients through chemical addition processes will be based upon an evaluation of the impacts of the discharge on beneficial uses of the receiving waters, the prevention of nuisance conditions, the economic feasibility of this additional treatment, and any other appropriate factors as part of an evaluation of the effectiveness of the watercourse management plan in achieving compliance with the Basin Plan narrative objective for nutrients.
2. A comprehensive program for chemical monitoring of receiving waters and effluent that will generate adequate data on ammonia nitrogen, nitrate nitrogen, nitrite nitrogen, organic nitrogen, total phosphate, ortho phosphate, dissolved oxygen (including vertical and diurnal dissolved oxygen profiles), pH, turbidity, biochemical oxygen demand (BOD) and other appropriate constituents and properties which may contribute to, or result from, related problems and impact water quality or beneficial uses.
3. A comprehensive program for physical and biological monitoring in the receiving waters that will generate adequate data on chlorophyll 'a', corrected chlorophyll 'a', pheophyton 'a', temperature (including diurnal and vertical temperature profiles), acute and chronic toxicity; the diversity and numbers of microinvertebrates, macroinvertebrates, and fish;

the dynamics of the aquatic flora (macroalgae, phytoplankton, and emergent vegetation) and the related dissolved oxygen regime, substrate composition and frequency of nuisance conditions; stratification characteristics, flow rate, and other appropriate constituents and properties which may contribute to nutrient related problems and impact beneficial uses.

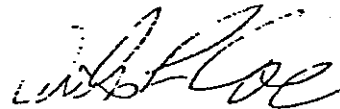
4. A comprehensive program for physical and biological monitoring of the effluent that will generate adequate data on flow, temperature, chronic and acute toxicity, and other appropriate constituents which may contribute to nutrient related problems and impact beneficial uses.
5. A procedure for evaluating the data collected under 2, 3, and 4 above and determining the potential for nutrient related problems that may impact beneficial uses.
6. Development and implementation of preventative and corrective actions that will ensure that a discharge containing nutrients will not adversely impact beneficial uses. These preventative and corrective actions may include, but are not limited to, the following:
 - A) Achievement of more stringent effluent limits for nutrient constituents discharged to the watercourse, through additional chemical treatment methods at the treatment facility, to further reduce nutrient loading to the river,
 - B) Maintenance of minimum wastewater flows discharged to the watercourse to prevent stagnant areas subject to nutrient related problems and to maintain the aquatic and riparian habitat beneficial uses that have been enhanced and/or created by such a discharge,
 - C) Effective measures for the instream chemical treatment of surface waters to prevent nutrient and stagnant water related nuisance problems that can, or potentially can, adversely impact aquatic habitat beneficial uses, where this instream treatment will not adversely impact beneficial uses,
 - D) Effective measures for the physical management of the watercourse channel and vegetation, and
 - E) Effective source control measures to reduce the amount of nutrient constituents in the wastewater.

- F) Other measures as deemed appropriate and necessary by the Regional Board to ensure compliance with the Basin Plan narrative objective for nutrients and for the protection of beneficial uses."

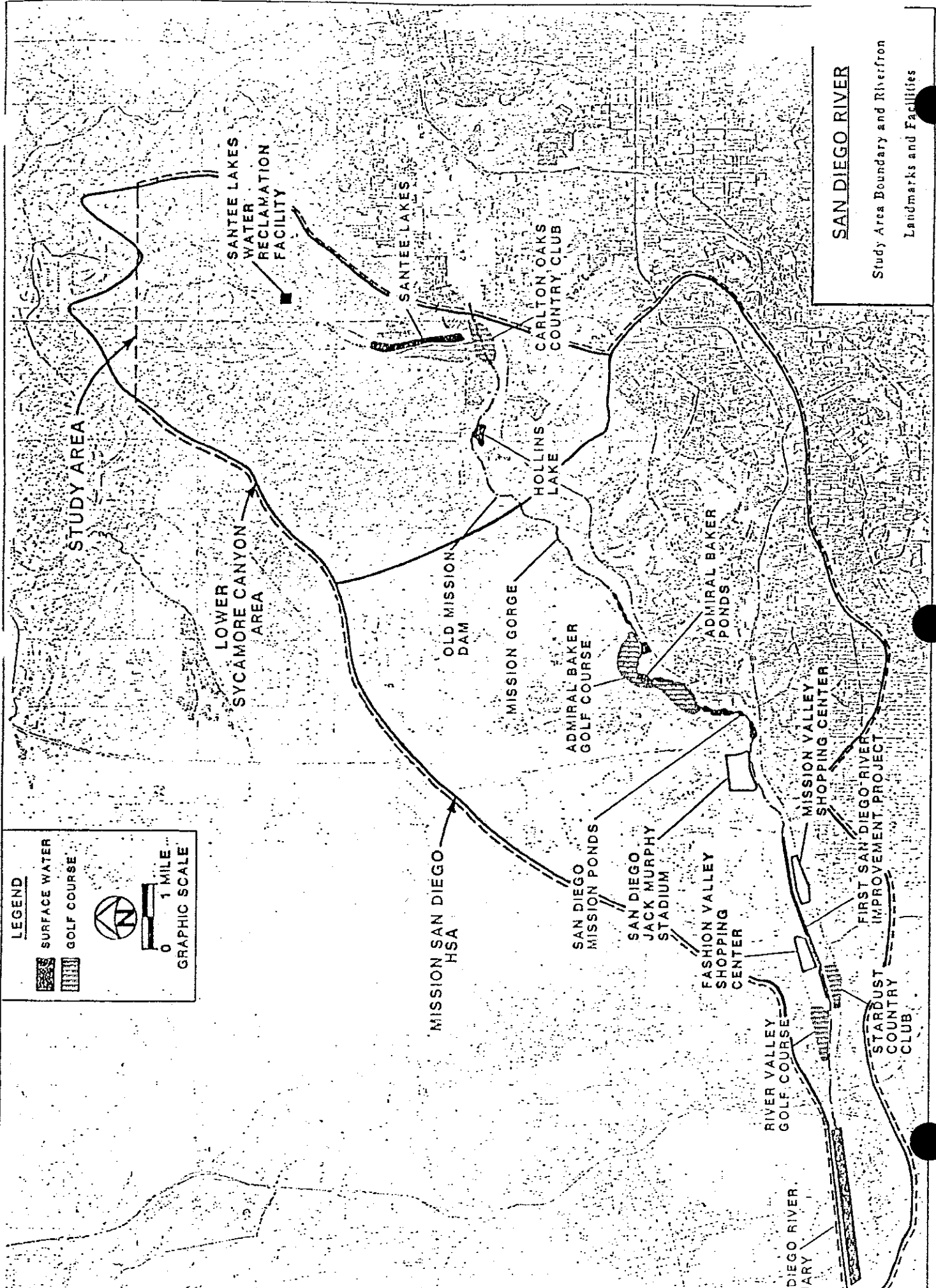
BE IT FURTHER RESOLVED, that the Regional Board also adds the following language to the Implementation Plan (Chapter 5) of the Basin Plan regarding the regulation of discharges of treated wastewater to Sycamore Canyon Creek and the San Diego River:

"The watercourse monitoring and management plan, and all the associated requirements, apply to the estuary of the San Diego River as well as the portions of the river downstream of all point source discharges. The Regional Board will require, in waste discharge requirements, the monitoring and management of the estuary, in a manner similar to the watercourse monitoring and management plan, in order to maintain the existing beneficial uses of the Estuary and the water quality necessary to maintain these beneficial uses. The Regional Board will regulate the volume of treated wastewater discharged into the San Diego River Estuary in waste discharge requirements to ensure adequate salinity in the estuary water and soils necessary to maintain the existing aquatic and wildlife habitat beneficial uses. This regulation of flows will include a prohibition of fresh water flows that could result in a conversion of the estuary from a saline environment to a fresh water environment."



I, Arthur L. Coe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Resolution adopted by the California Regional Water Quality Control Board, San Diego Region on March 11, 1991.



Arthur L. Coe
Executive Officer



LEGEND

-  SURFACE WATER
-  GOLF COURSE



0 1 MILE
GRAPHIC SCALE

SAN DIEGO RIVER

Study Area Boundary and Riverfront
Landmarks and Facilities

STUDY AREA

LOWER SYCAMORE CANYON AREA

SANTEE LAKES WATER RECLAMATION FACILITY

SANTEE LAKES

CARLTON OAKS COUNTRY CLUB

HOLLINS LAKE

OLD MISSION DAM

MISSION GORGE

ADMIRAL BAKER GOLF COURSE

ADMIRAL BAKER PONDS

MISSION SAN DIEGO HSA

SAN DIEGO MISSION PONDS

SAN DIEGO JACK MURPHY STADIUM

FASHION VALLEY SHOPPING CENTER

MISSION VALLEY SHOPPING CENTER

FIRST SAN DIEGO RIVER IMPROVEMENT PROJECT

RIVER VALLEY GOLF COURSE

STARDUST COUNTRY CLUB

DIEGO RIVER

Attachment 4 - Proposed Changes to Water Quality Objectives for Mission San Diego and Santee Hydrologic Subareas (Concentration in mg/l or as noted)

Constituent	Surface Water Objective				Ground Water Objective			
	Existing		Proposed		Existing		Proposed	
	Mission San Diego HSA	Lower Sycamore Canyon Area	Mission San Diego HSA	Lower Sycamore Canyon Area	Mission San Diego HSA	Lower Sycamore Canyon Area	Mission San Diego HSA	Lower Sycamore Canyon Area
Total Dissolved Solids	1,500	1,000	1,500	1,500	3,000	1,000	3,000	2,000
Chloride	400	400	400	400	800	400	800	800
Percent Sodium	60	60	60	60	60	60	60	60
Sulfate	500	500	500	500	600	500	600	600
Nitrate (as NO3)	---	---	---	---	45	45	45	45
Nitrogen & Phosphorus	a	a	b	b	---	---	---	---
Iron	1.0	1.0	1.0	1.0	0.3	0.3	0.3	0.3
Manganese	1.0	1.0	1.0	1.0	0.05	0.05	0.05	0.05
Methylene Blue	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Active Substances								
Boron	1.0	1.0	1.0	1.0	2.0	0.5	2.0	2.0
Odor	none	none	none	none	none	none	none	none
Turbidity (NTU)	20	20	20	20	5	5	5	5
Color (Units)	20	20	20	20	15	15	15	15
Flouride	---	---	---	---	1.0	1.0	1.0	1.0

Legend

- a. Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate emergent plant growth. Threshold total Phosphorus (P) concentrations shall not exceed 0.05 mg/l in any stream at the point where it enters any reservoir or lake, nor 0.025 mg/l in any reservoir or lake. A desired goal in order to prevent plant nuisances in streams and other flowing waters appears to be 0.1 mg/l total P. These values are not to be exceeded more than 10% of the time unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N:P = 10:1 shall be used.
- b. See Resolve Item No. 3 of San Diego Regional Board Resolution No. 90-27 (Attachment 1) and Resolve Item no. 1 of San Diego Regional Board Resolution No. 91-23 (Attachment 2).
- c. Applies to the alluvial aquifer only of the Lower Sycamore Canyon Area. The remainder of the ground water in the Santee HSA retains the existing ground water quality objectives.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

EVALUATION REPORT
ON THE
REQUEST FOR MODIFICATION
OF
SURFACE AND GROUND WATER QUALITY OBJECTIVES
FOR THE
MISSION SAN DIEGO AND
A PORTION OF THE
SANTEE HYDROLOGIC SUBAREAS

FEBRUARY 1990

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

MODIFICATION OF THE IMPLEMENTATION PLAN
FOR THE
MISSION SAN DIEGO (7.11)
AND A PORTION OF THE
SANTÉE (7.12) HYDROLOGIC SUBAREAS

AN ADDENDUM TO
STAFF REPORT
DATED FEBRUARY, 1990

FEBRUARY 19, 1991
REVISED FEBRUARY 28, 1991

BY WANDA K. E. SMITH
ENVIRONMENTAL SPECIALIST